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Our Case No. 742-234

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Davidson

International Application No.:

PCT/US02/32633

Authorized Officer:

James G. Smith

International Filing Date: October 10, 2002

For:

Quick Release Mechanism for
Tools Such as Socket Wrenches**SUPPLEMENTAL REPLY TO WRITTEN OPINION**

Mail Stop PCT, Attn: IPEA/US

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1459

Dear Sir:

As a supplement to the Reply to Written Opinion mailed October 14, 2003, please substitute pages 9-19 for pages 9-13 as originally filed. This Supplemental Reply adds new Claims 20-48, amends Claims 3 and 7 to correct a typographical error (deletion of the word "second" in the phrase "second ring"), and amends Claims 8 and 12-13 to clarify the recited relationship. The new claims will now be discussed.

New Claims 20-32

New independent Claim 20 recites a tool with a drive stud that has an adjacent portion and an upset portion extending radially outwardly from the adjacent portion. A coil spring extends around the adjacent portion and comprises a first end that biases a locking element to a tool engaging position and a second end that reacts against the upset portion. Support for this

claim can be found, *inter alia*, in the last full paragraph on page 6 of Applicant's specification.

Dependent Claims 21-32 recite additional features.

Applicant respectfully submits that the proposed combination of Hoff et al. and Roberts et al. does not show a quick release mechanism comprising a drive stud with an upset portion that reacts against a spring, as recited in new independent Claim 20. In Hoff et al., a locking ring 92 is attached to a circumferential groove 86 in the exterior surface 19 of the shaft 18 (see Figures 3 and 4). The locking ring 92 is a separately-formed component that is secured to the shaft 18. This is a completely different structure from the recited drive stud with an upset portion. Further, while Roberts et al. discloses a drive stud with a shoulder, there is no teaching that this shoulder is an upset portion of the drive stud.

New Claims 33-48

New Claims 33-48 are similar to the originally-filed claims but include further clarification regarding the shoulder/raised stop and spring elements. Turning first to the shoulder element, new independent Claims 33 and 34 recite that the shoulder forms a transition between a radially outer surface and a radially inner surface and that the spring axially overlaps the radially inner surface. Similarly, new independent Claim 35 recites that the raised stop is adjacent a radially inner surface and that the spring axially overlaps the radially inner surface. In contrast, the spring in Hoff et al. does not axially overlap the disclosed groove. Accordingly, new independent Claims 33-35 and their dependent claims are patentable over the combination of Hoff et al. and Roberts et al.

With respect to the spring elements, new independent Claim 34 recites that a portion of the spring facing the shoulder defines an inner spring diameter and an outer spring diameter, wherein the recited radially outer surface defines a surface diameter adjacent the spring, and

wherein the surface diameter is greater than the inner spring diameter and less than the outer spring diameter. Similarly, new independent Claim 35 recites that a portion of the spring facing the raised stop defines an inner spring diameter and an outer spring diameter, wherein the raised stop defines a stop diameter adjacent the spring, and wherein the stop diameter is greater than the inner spring diameter and less than the outer spring diameter. These recitations address the concern raised in the Written Opinion that originally-filed Claims 2 and 3, which are similar to new independent Claims 34 and 35, are inoperative if the recited spring is interpreted as being larger than the recited shoulder/raised stop. The recitation of the diameters of the components in Claims 34 and 35 make clear that the portion of the spring facing the shoulder/raised stop is able to react against the shoulder/raised stop.

Finally, Applicant wishes to address two additional issues with respect to the Written Opinion. First, it was asserted in the Written Opinion that a collar (or "sliding sleeve") is necessary for the device recited in Claim 1, which is similar to new independent Claim 33, to operate. Applicant respectfully disagrees and submits that a user can manipulate the spring directly without the use of a collar. In support of this submission, Applicant notes that U.S. Patent No. 4,848,196, which is owned by the assignee of the present application, shows a quick release mechanism in which a spring is used without a collar. As shown in Figure 5 of that patent, an operator grips the lower loop of the spring to lift the spring and move the pin.

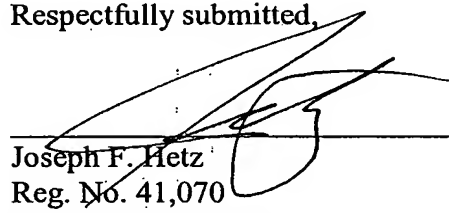
Additionally, Applicant submits that the rejections based on Hoff et al. are improper because Hoff et al. does not provide an enabling disclosure of a quick release mechanism. Figures 4 and 5 show the coupling structure of the socket drive tool in its retaining and releasing conditions, respectively. Figure 5 shows that the transfer ball 46 is moved downwardly and the detent ball 30 is moved upwardly in the releasing condition, and col. 3, lines 65-67 note that the

transfer ball 46 can be moved by gravity. However, Hoff et al. does not disclose how the rod 44 and the detent ball 30 move to the position shown in Figure 5 when the transfer ball 46 is moved downwardly. Without such a teaching, Hoff et al. fails to provide an enabling disclosure of a quick release mechanism and, therefore, cannot be used as a basis to reject the claims.

In view of the foregoing amendments and remarks, Applicant respectfully submits that all claims meet the criteria set out in PCT Article 33(2)-(4).

Dated: October 27, 2003

Respectfully submitted,



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